

Material Properties List

Material Properties Sheet Link:
<https://docs.google.com/spreadsheets/d/10BFg2Ebkowm6dNkgG27hSjeSBtV-hXoa/edit?usp=sharing&ouid=111074214360211582458&rtpof=true&sd=true>

Material	Units	E1	E2	G12	v12	t	a	SL+	SL-	ST+	ST-	SS	Citation
T300/ 8500, vf = .6	GPa, mm, Mpa	151	7.98	4.1	0.248	0.259	idk	1448	1448	44.8	248	62.1	Veloso, Mota, Cunha, "Analytical design of in-plane and through-the-thickness auxetic composite laminates"

Kevlar 49, vf = .6	GPa, mm, MPa	112.4	4.48	2.57	0.36	0.29	idk	1379	276	27.6	64.8	60.0	Gibson, "Principles of Composite Material Mechanics"
E-glass /8500, vf = .6	GPa, mm, MPa	45.7	10.5	4.1	0.252	0.208	idk	584	803	43	187	64	Veloso, Mota, Cunha, "Analytical design of in-plane and through-the-thickness auxetic composite laminates"

IM7/9 77-3	GPa, mm, GPa	191	9.94	7.79	0.35	0.259	idk	3.25	1.6	0.062	0.098	0.075	Tsai, Melo, "An invari ant- base d theor y of comp osite s"
T700 C-Ply 55	GPa, mm, GPa	121	8	4.7	0.3	0.259	idk	2.53	1.7	0.066	0.022	0.093	Tsai, Melo, "An invari ant- base d theor y of comp osite s"
T800/ Cytec	Gpa, mm, Gpa	162	9	5	0.4	0.259	idk	3.77	1.66	0.056	0.15	0.098	Tsai, Melo, "An invari ant- base d theor y of comp osite s"
Wove n 2024 - 2025 Chas sis	Pa,m m,Pa	5.20E +10	5.20E +10	2.90E +09	0.04	0.259	idk	5.13E +08	- 4.37E +08	5.13E +08	- 4.37E +08	1.20E +08	2025 VDR - Kurt Portf olio

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